

### **REMARKS**

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-3 and 5-20 are presently active in this case. The present Amendment amends Claims 3, 17 and 19 without introducing any new matter.

The outstanding Office Action rejected Claims 1-7, 15-17 and 19-20 under 35 U.S.C. §112, first paragraph, as based on a disclosure which is not enabling. Claims 3-7, 17 and 19 were rejected under 35 U.S.C. §112, second paragraph, as indefinite. Claims 1-3, 5-6, 8-13 and 15-20 were rejected under 35 U.S.C. §102(b) as anticipated by Nounin et al. (U.S. Patent No. 5,802,469, herein "Nounin"). Claims 7 and 14 were rejected under 35 U.S.C. §103(a) as unpatentable over Nounin in view of Ohno et al. (U.S. Patent No. 6,219,715, herein "Ohno").

In response to the rejection of Claims 1-7, 15-17 and 19-20 under 35 U.S.C. §112, first paragraph, Applicants traverse the rejection and request reconsideration of the rejection, as next discussed.

The outstanding Office Action asserts that Applicants' disclosure does not enable one skill in the art to make and/or use the invention, stating that the disclosure does not teach "the radio terminal is further configured to process the response message received by the first or second communication interface" recited in Claims 1 and 15, and also does not teach "the communication interface is also configured to transmit a response message corresponding to the request obtained by the protocol processing in the form such as received by the radio terminal through the second sub-network" recited in Claims 3, 17 and 19.<sup>1</sup> Applicants respectfully disagree, since Applicants' disclosure from page 25, line 31 to page 26, line 3 describes that "the radio terminal is further configured to process the response message received by the first or second communication interface," and also recites from page 24, line

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<sup>1</sup> See the outstanding Office Action at page 4, lines 6-9.

35 to page 25, line 27 describes that “the communication interface is configured to transmit a response message corresponding to the request message obtained by the protocol processing as an encapsulated IP packet to be received by the radio terminal through the second sub-network.” Further support for this feature is given in Applicants’ Figure 10.

In response to the rejection of Claims 3-7, 17 and 19 under 35 U.S.C. §112, second paragraph, Claims 3, 17 and 19 are amended to recite “obtained by the protocol processing as an encapsulated IP packet to be received by the radio terminal.” These changes find non-limiting support in Applicants’ specification at page 9, lines 15-23. In view of amended Claims 3, 17 and 19, it is believed that all pending claims are definite and no further rejection on that basis is anticipated. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work with the Examiner in a joint effort to derive mutually acceptable language.

In response to the rejection of Claims 1-3, 5-6, 8-13 and 15-20 under 35 U.S.C. §102(b), Applicants respectfully request reconsideration of this rejection and traverse the rejection, as discussed next.

Briefly recapitulating, Applicants’ invention, as recited in Claim 1, relates to a network system including, *inter alia*, a radio terminal, a first sub-network and a second sub-network. The radio terminal has a first communication interface useable for reception only and a second communication interface usable for transmission and reception. The radio terminal can be connected to the first sub-network through a radio base station of a downlink radio network by using the first communication interface. The radio terminal can also be connected to the second sub-network through a bidirectional communication network by using the second communication interface. The second sub-network is connected with the first sub-network through a backbone network. The first sub-network includes at least a packet relay device.

As disclosed in the specification, when a radio terminal enters a radio area of the radio base station, the radio terminal receives notification message indicating an existence or an address of the packet relay device on the first sub-network through the downlink radio network by using the first communication interface. Subsequently, the radio terminal transmits a request message requesting a protocol processing with respect to the first sub-network from the radio terminal through the second sub-network. The packet relay device receives the request message through the second sub-network and the backbone network, and carries out the protocol processing on the first sub-network according to the request message on behalf of the radio terminal. The packet relay device returns a response message corresponding to the request message obtaining by the protocol processing to the radio terminal through the downlink radio network or the bidirectional communication network. Finally, the radio terminal processes the response message received by the first or second communication interface.

As stated in independent Claims 3, 8 and 17-20, when the radio terminal encapsulates the request message into an IP (Internet Protocol) packet destined to the address of the packet relay device obtained according to the notification message and transmits the IP packet as a request message, the packet relay device decapsulates the encapsulated IP packet so as to take out the request message, carries out the protocol processing, and transmits the response message corresponding to the request message so that the radio terminal receives it through the second sub-network.

Applicants respectfully submit that Nounin does not disclose such a feature. Nounin discloses a radio communication system with a first base station 101 connected to the network for providing bi-directional channel at low transmission speed, and a second base station 103 connected to the network for providing a high speed downlink channel, and a

terminal device 105.<sup>2</sup> Nounin merely discloses that the terminal device notifies the second base station of the second addresses regarding the second channel of the terminal via the first base station (the first channel), as also explained in detail in the response filed December 15, 2004.

The outstanding Office Action asserts that Nounin describes the first sub-network 5 being a uni-directional channel that allows data to be transmitted uni-directionally between the radio terminal 105 and the base station 103; and the second sub-network 4 being a bi-directional downlink channel between the base station and the radio terminal.<sup>3</sup> Applicants respectfully disagree. Applicants' invention, as recited in independent Claims 1, 3, 8, 15 and 17-20, clearly recites that the radio terminal is connectable to the first radio base station through a downlink radio network. In Nounin, the terminal 105 is connectable to the second base station 103 through the *uni-directional* channel 5.<sup>4</sup> Accordingly, it can be concluded that the uni-directional channel 5 in Nounin corresponds to the downlink radio network of Applicants' invention and *does not correspond* to the first sub-network of the Applicants' invention. Accordingly, Nounin fails to teach or suggest the claimed second sub-network being a bi-directional downlink channel between the base station and the radio terminal.

Furthermore, in Applicants' invention, the radio terminal is connectable to the second radio base station through a bi-directional communication network, as recited in Claims 1, 3, 8, 15 and 17-20. Nounin's terminal 105 is connectable to the first base station 101 through the bi-directional channel 4.<sup>5</sup> Accordingly, the bi-directional channel 4 in Nounin corresponds to the bi-directional communication network of Applicants' invention *and does not correspond* to the second sub-network of Applicants' invention. For the above reasons, it

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<sup>2</sup> See Nounin in Figure 3, column 8, lines 24-30.

<sup>3</sup> See the outstanding Office Action at page 2, lines 8-12 and in Nounin in Figure 3.

<sup>4</sup> See Nounin at column 8, lines 24-41 and in Figure 3.

<sup>5</sup> See Nounin in Figure 3.

is respectfully submitted that Nounin fails to teach or suggest the claimed first and second sub-networks.

Since Nounin fails to teach or suggest the first and second sub-networks, Applicants respectfully submit that Nounin also fails to teach or suggest "the radio terminal receive a notification message indicating an existence or an address of the packet relay device on the first sub-network through the downlink radio network," as clearly recited in independent Claims 1, 8, 15, 18 and 20, as further explained in Applicants' response filed on December 15, 2004.

Applicants further respectfully submit that Nounin also fails to teach or suggest that "the packet relay device carries out the protocol processing on the first sub-network according to the request message on behalf of the radio terminal," as clearly recited in independent Claims 1, 3, 15, 17 and 19.

The outstanding Office Action asserts that Nounin teaches that upon establishing wireless communication between the radio terminal and the base station, the radio terminal sends a request to the base station for processing; after processing the request, the base station sends the response data back to the radio terminal.<sup>6</sup> Applicants respectfully disagree. According to Applicants' invention, the packet relay device carries out the protocol processing on the first sub-network according to the request message on behalf of the radio terminal. The outstanding Office Action asserts that Nounin discloses a base station receiving and processing requests from radio terminal via a plurality of protocols, and that therefore Nounin's system is performing protocol processing, and points out to Nounin at column 6, lines 60-65. However, Nounin merely teaches that an address resolution protocol is used for discrete control of the correspondence of the MAC address and the IP address.<sup>7</sup> Using an address resolution protocol, as taught by Nounin, *is not* a base station receiving and

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<sup>6</sup> See the outstanding Office Action at page 3, lines 9-14.

<sup>7</sup> See Nounin at column 6, lines 62-66.

processing requests from a radio terminal via a plurality of protocols, as claimed. Nounin further neither teaches nor suggests the first sub-network or a packet relay device in the first sub-network, as described above. In Applicants' invention, the packet relay device is not the base station, as clearly recited in the claims. The base station is located between the radio terminal and the first sub-network, while the packet relay device is in the first sub-network.<sup>8</sup>

Accordingly, Nounin also fails to teach or suggest "the packet relay device receives a request message requesting a protocol processing with respect to the first sub-network from the radio terminal through the second sub-network," as claimed.

In response to the rejection of Claims 7 and 14 under 35 U.S.C. §103(a), Applicants respectfully request reconsideration and traverse this rejection. Since all the independent Claims are believed to be allowable, dependent Claims 7 and 14 are also believed to be allowable. Furthermore, Ohno does not remedy the deficiencies Nounin. Ohno discloses an automatic address distributing system, and is silent on the features as above noted.

The present Amendment is submitted in accordance with the provisions of 37 C.F.R. §1.116, which after Final Rejection permits entry of amendments placing the claims in better form for consideration on appeal. As the present Amendment is believed to overcome outstanding rejections under 35 U.S.C. §112, first and second paragraph, 35 U.S.C. §102(b) and 35 U.S.C. §103(a), the present Amendment places the application in better form for consideration on appeal. In addition, the present amendment is not believed to raise new issues because the changes to Claims 3, 17 and 19 are of a minor nature and are supported by the specification as originally filed. It is therefore respectfully requested that 37 C.F.R. §1.116 be liberally construed, and that the present amendment be entered.

Consequently, in view of the present Amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in

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<sup>8</sup> See for example in Applicants' Specification in the 3<sup>rd</sup> and 6<sup>th</sup> paragraph, and in Claim 1.

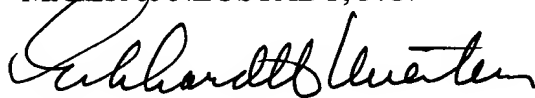
Application No. 09/842,862  
Reply to Office Action of June 6, 2005

condition for formal Allowance. A Notice of Allowance for Claims 1-3 and 5-20 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



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Eckhard H. Kuesters  
Attorney of Record  
Registration No. 28,870

Customer Number

**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 06/04)

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